

AMENDMENTS TO THE CLAIMS

1 – 17. (Canceled)

18. (Previously Presented) A method of using voice activated commands to instruct electronic equipment to perform one or more functions, comprising:

- receiving at a remote control device speech representing a user command;
- digitizing the speech at the remote control device;
- compressing the digitized speech;
- transmitting the compressed digitized speech wirelessly to the electronic equipment;
- receiving the compressed digitized speech at the electronic equipment;
- decompressing the digitized speech;
- performing at the electronic equipment a function based upon a stored instruction associated with the digitized speech;
- subtracting the unwanted ambient audio from the decompressed digitized speech; and
- storing unwanted ambient audio generated by the electronic equipment in memory in the electronic equipment;

wherein receiving at a remote control device speech representing a user command comprises receiving at a remote control device user instructions and unwanted ambient audio; and
wherein the unwanted ambient audio is stored in memory in the electronic equipment for an amount of time determined by a longest expected digitized speech command from a user.

19-57. (Canceled)

58. (Previously Presented) A remote control apparatus that receives voice activated commands, comprising:

- a first microphone;
- an enable microphone function, wherein the at least one enable microphone function activates the first microphone such that the first microphone can receive one or more inputs;
- at least one processor for digitizing inputs received at the first microphone;
- at least one transmitter for wirelessly transmitting the digitized inputs to a device associated with the remote control apparatus; and
- at least one standby command that identifies when the at least one enable microphone function is enabled;
- wherein the standby command is generated upon detection of the completion of the one or more inputs; and

wherein the standby command is encoded and transmitted by the remote control apparatus over a wireless channel for reception by the device.

59. (Previously Presented) A remote control apparatus that receives voice activated commands, comprising:

- a first microphone;
- an enable microphone function, wherein the at least one enable microphone function activates the first microphone such that the first microphone can receive one or more inputs;
- at least one processor for digitizing inputs received at the first microphone;
- at least one transmitter for wirelessly transmitting the digitized inputs to a device associated with the remote control apparatus; and
- at least one standby command that identifies when the at least one enable microphone function is enabled; wherein the standby command is generated upon detection of the completion of the one or more inputs; wherein the completion of the one or more inputs is detected by the remote control apparatus when the level of the one or more inputs falls below a first threshold value; and wherein the standby command is compressed prior to being transmitted by remote control device.

60. (Previously Presented) A remote control apparatus that receives voice activated commands, comprising:

- a first microphone;
- an enable microphone function, wherein the at least one enable microphone function activates the first microphone such that the first microphone can receive one or more inputs;
- at least one processor for digitizing inputs received at the first microphone;
- at least one transmitter for wirelessly transmitting the digitized inputs to a device associated with the remote control apparatus; and
- at least one standby command that identifies when the at least one enable microphone function is enabled; wherein the standby command is generated upon detection of the completion of the one or more inputs; wherein the completion of the one or more inputs is detected by the remote control apparatus when the level of the one or more inputs falls below a first threshold value; and wherein the standby command effects decompression of speech to cease in the device.

61. (Canceled)

62. (Previously Presented) A remote control apparatus that receives voice activated commands, comprising:

- a first microphone;
- an enable microphone function, wherein the at least one enable microphone function activates the first microphone such that the first microphone can receive one or more inputs;
- at least one processor for digitizing inputs received at the first microphone;
- at least one transmitter for wirelessly transmitting the digitized inputs to a device associated with the remote control apparatus; and
- a digital signal filter, wherein the digital signal filter is operative to reduce ambient noise received by the first microphone;

wherein the digital signal filter comprises a band pass filter.

63-66. (Canceled)

67. (Previously Presented) A remote control apparatus that receives voice activated commands, comprising:

- a first microphone;
- an enable microphone function, wherein the at least one enable microphone function activates the first microphone such that the first microphone can receive one or more inputs;
- at least one processor for digitizing inputs received at the first microphone; at least one transmitter for wirelessly transmitting the digitized inputs to a device associated with the remote control apparatus;
- at least one speech encoder that encodes speech received at the first microphone when the level of the one or more inputs is above a threshold value established by the at least one processor; and
- at least one standby command that identifies when the at least one enable microphone function is enabled;

wherein the standby command is transmitted to the device when the level of the one or more inputs falls below a second threshold value.

68-85. (Canceled)

86. (Presently Presented) A home communication terminal that receives voice activated commands and, based upon the voice activated commands, instructs electronic equipment to perform one or more functions, comprising:

- a receiver, wherein the receiver receives encoded digitized signals from at least one remote device, and wherein the encoded digitized signals include one or more signals representing at least one voice activated command;

at least one speech decoder, wherein the at least one speech decoder decodes the encoded digitized signals;
at least one memory, wherein the at least one memory stores at least a portion of the decoded digitized signals;
at least one audio buffer, for storing audio signals broadcasted by a device in electrical communication with the receiver;

at least one processor, wherein the at least one processor eliminates stored audio signals from the decoded digitized signals, such that the resulting decoded digitized signals do not contain audio signals broadcasted by the device in electrical communication with the receiver;

at least one comparison component, wherein the at least one comparison component matches at least a portion of the resulting decoded digital signals to one or more commands representing at least one function the home communication terminal is operative to perform; and

a training procedure application, wherein the dictionary of terms is constructed during a training procedure effected by the processor in conjunction with a training procedure application;

wherein the at least one memory further comprises a dictionary of terms, wherein each term is associated with the one or more commands representing the at least one ~~on~~ function the home communication terminal is operative to perform; and

wherein the training procedure application associates a sequence of keys pressed on the at least one remote device with one or more terms in the dictionary of terms.

87. (Presently Presented) A home communication terminal that receives voice activated commands and, based upon the voice activated commands, instructs electronic equipment to perform one or more functions, comprising:

a receiver, wherein the receiver receives encoded digitized signals from at least one remote device, and wherein the encoded digitized signals include one or more signals representing at least one voice activated command;

at least one speech decoder, wherein the at least one speech decoder decodes the encoded digitized signals;

at least one memory, wherein the at least one memory stores at least a portion of the decoded digitized signals;

at least one audio buffer, for storing audio signals broadcasted by a device in electrical communication with the receiver;

at least one processor, wherein the at least one processor eliminates stored audio signals from the decoded digitized signals, such that the resulting decoded digitized signals do not contain audio signals broadcasted by the device in electrical communication with the receiver; and

at least one comparison component, wherein the at least one comparison component matches at least a portion of the resulting decoded digital signals to one or more commands representing at least one function the home communication terminal is operative to perform; and

a training procedure application, wherein the dictionary of terms is constructed during a training procedure

effected by the processor in conjunction with a training procedure application;

wherein the at least one memory further comprises a dictionary of terms, wherein each term is associated with the one or more commands representing the at least one ~~on~~ function the home communication terminal is operative to perform; and

wherein the training procedure application is stored in the at least one memory of the home communication terminal.

88. (Canceled)

89. (Previously Presented) A home communication terminal that receives voice activated commands and, based upon the voice activated commands, instructs electronic equipment to perform one or more functions, comprising:

a receiver, wherein the receiver receives encoded digitized signals from at least one remote device, and wherein the encoded digitized signals include one or more signals representing at least one voice activated command;

at least one speech decoder, wherein the at least one speech decoder decodes the encoded digitized signals;

at least one memory, wherein the at least one memory stores at least a portion of the decoded digitized signals;

at least one audio buffer, for storing audio signals broadcasted by a device in electrical communication with the receiver;

at least one processor, wherein the at least one processor eliminates stored audio signals from the decoded digitized signals, such that the resulting decoded digitized signals do not contain audio signals broadcasted by the device in electrical communication with the receiver;

at least one comparison component, wherein the at least one comparison component matches at least a portion of the resulting decoded digital signals to one or more commands representing at least one function the home communication terminal is operative to perform; and

a training procedure application, wherein the dictionary of terms is constructed during a training procedure effected by the processor in conjunction with a training procedure application;

wherein the at least one memory further comprises a dictionary of terms, wherein each term is associated with the one or more commands representing the at least one ~~on~~ function the home communication terminal is operative to perform; and

wherein the training procedure application audibly instructs a user of the home communication terminal not to speak.

90. (Presently Presented) A home communication terminal that receives voice activated commands and, based upon the voice activated commands, instructs electronic equipment to perform one or more

functions, comprising:

- a receiver, wherein the receiver receives encoded digitized signals from at least one remote device, and wherein the encoded digitized signals include one or more signals representing at least one voice activated command;

- at least one speech decoder, wherein the at least one speech decoder decodes the encoded digitized signals;

- at least one memory, wherein the at least one memory stores at least a portion of the decoded digitized signals;

- at least one audio buffer, for storing audio signals broadcasted by a device in electrical communication with the receiver;

- at least one processor, wherein the at least one processor eliminates stored audio signals from the decoded digitized signals, such that the resulting decoded digitized signals do not contain audio signals broadcasted by the device in electrical communication with the receiver;

- at least one comparison component, wherein the at least one comparison component matches at least a portion of the resulting decoded digital signals to one or more commands representing at least one function the home communication terminal is operative to perform; and

- a training procedure application, wherein the dictionary of terms is constructed during a training procedure effected by the processor in conjunction with a training procedure application;

- wherein the at least one memory further comprises a dictionary of terms, wherein each term is associated with the one or more commands representing the at least one ~~on~~ function the home communication terminal is operative to perform; and

- wherein the training procedure application graphically instructs a user of the home communication terminal not to speak.

91. (Previously Presented) A home communication terminal that receives voice activated commands and, based upon the voice activated commands, instructs electronic equipment to perform one or more functions, comprising:

- a receiver, wherein the receiver receives encoded digitized signals from at least one remote device, and wherein the encoded digitized signals include one or more signals representing at least one voice activated command;

- at least one speech decoder, wherein the at least one speech decoder decodes the encoded digitized signals;

- at least one memory, wherein the at least one memory stores at least a portion of the decoded digitized signals;

- at least one audio buffer, for storing audio signals broadcasted by a device in electrical communication with the receiver;

- at least one processor, wherein the at least one processor eliminates stored audio signals from the decoded digitized signals, such that the resulting decoded digitized signals do not contain audio signals broadcasted by the device in electrical communication with the receiver; and

- at least one comparison component, wherein the at least one comparison component matches at least

a portion of the resulting decoded digital signals to one or more commands representing at least one function the home communication terminal is operative to perform;

wherein the processor of the home communication terminal estimates the distance of remote control by emitting a pulsed non-speech signal that is received at the remote device.

92. (Previously Presented) A home communication terminal that receives voice activated commands and, based upon the voice activated commands, instructs electronic equipment to perform one or more functions, comprising:

a receiver, wherein the receiver receives encoded digitized signals from at least one remote device, and wherein the encoded digitized signals include one or more signals representing at least one voice activated command;

at least one speech decoder, wherein the at least one speech decoder decodes the encoded digitized signals;

at least one memory, wherein the at least one memory stores at least a portion of the decoded digitized signals;

at least one audio buffer, for storing audio signals broadcasted by a device in electrical communication with the receiver;

at least one processor, wherein the at least one processor eliminates stored audio signals from the decoded digitized signals, such that the resulting decoded digitized signals do not contain audio signals broadcasted by the device in electrical communication with the receiver; and

at least one comparison component, wherein the at least one comparison component matches at least a portion of the resulting decoded digital signals to one or more commands representing at least one function the home communication terminal is operative to perform;

wherein the processor of the home communication terminal estimates the distance of remote control by emitting a pulsed non-speech signal that is received at the remote device; and

wherein the processor receives the pulsed non-speech signal from the remote device.

93. (Previously Presented) A home communication terminal that receives voice activated commands and, based upon the voice activated commands, instructs electronic equipment to perform one or more functions, comprising:

a receiver, wherein the receiver receives encoded digitized signals from at least one remote device, and wherein the encoded digitized signals include one or more signals representing at least one voice activated command;

at least one speech decoder, wherein the at least one speech decoder decodes the encoded digitized signals;

at least one memory, wherein the at least one memory stores at least a portion of the decoded digitized signals;

at least one audio buffer, for storing audio signals broadcasted by a device in electrical communication with the receiver;

at least one processor, wherein the at least one processor eliminates stored audio signals from the decoded digitized signals, such that the resulting decoded digitized signals do not contain audio signals broadcasted by the device in electrical communication with the receiver; and

at least one comparison component, wherein the at least one comparison component matches at least a portion of the resulting decoded digital signals to one or more commands representing at least one function the home communication terminal is operative to perform;

wherein the processor of the home communication terminal estimates the distance of remote control by emitting a pulsed non-speech signal that is received at the remote device;

wherein the processor receives the pulsed non-speech signal from the remote device; and

wherein the processor stores the non-speech pulsed signal in memory and compares the pulsed non-speech signal received from the remote device with the non-speech pulsed signal in memory.

94. (Presently Presented) A home communication terminal that receives voice activated commands and, based upon the voice activated commands, instructs electronic equipment to perform one or more functions, comprising:

a receiver, wherein the receiver receives encoded digitized signals from at least one remote device, and wherein the encoded digitized signals include one or more signals representing at least one voice activated command;

at least one speech decoder, wherein the at least one speech decoder decodes the encoded digitized signals;

at least one memory, wherein the at least one memory stores at least a portion of the decoded digitized signals;

at least one audio buffer, for storing audio signals broadcasted by a device in electrical communication with the receiver;

at least one processor, wherein the at least one processor eliminates stored audio signals from the decoded digitized signals, such that the resulting decoded digitized signals do not contain audio signals broadcasted by the device in electrical communication with the receiver; and

at least one comparison component, wherein the at least one comparison component matches at least a portion of the resulting decoded digital signals to one or more commands representing at least one function the home communication terminal is operative to perform; and

a training procedure application, wherein the dictionary of terms is constructed during a training procedure effected by the processor in conjunction with a training procedure application;

wherein the at least one memory further comprises a dictionary of terms, wherein each term is associated with the one or more commands representing the at least one ~~on~~ function the home communication terminal is operative to perform; and

wherein the training procedure application estimates ambient audio degradation by comparing emitted TV program audio with the audio signals broadcasted by a device in electrical communication with the receiver.

95. (Previously Presented) A home communication terminal that receives voice activated commands and, based upon the voice activated commands, instructs electronic equipment to perform one or more functions, comprising:

- a receiver, wherein the receiver receives encoded digitized signals from at least one remote device, and wherein the encoded digitized signals include one or more signals representing at least one voice activated command;

- at least one speech decoder, wherein the at least one speech decoder decodes the encoded digitized signals;

- at least one memory, wherein the at least one memory stores at least a portion of the decoded digitized signals;

- at least one audio buffer, for storing audio signals broadcasted by a device in electrical communication with the receiver;

- at least one processor, wherein the at least one processor eliminates stored audio signals from the decoded digitized signals, such that the resulting decoded digitized signals do not contain audio signals broadcasted by the device in electrical communication with the receiver;

- at least one comparison component, wherein the at least one comparison component matches at least a portion of the resulting decoded digital signals to one or more commands representing at least one function the home communication terminal is operative to perform; and

- a training procedure application, wherein the training procedure application calculates the time delay between audio signals broadcasted by a device in electrical communication with the receiver and at least some of the unwanted signals;

- wherein the encoded digitized signals further comprise unwanted signals.

96. (Canceled)

97. (Previously Presented) A home communication terminal that receives voice activated commands and, based upon the voice activated commands, instructs electronic equipment to perform one or more functions, comprising:

- a receiver, wherein the receiver receives encoded digitized signals from at least one remote device, and wherein the encoded digitized signals include one or more signals representing at least one voice activated command;

- at least one speech decoder, wherein the at least one speech decoder decodes the encoded digitized signals;

- at least one memory, wherein the at least one memory stores at least a portion of the decoded digitized signals;

- at least one audio buffer, for storing audio signals broadcasted by a device in electrical communication with the receiver;

- at least one processor, wherein the at least one processor eliminates stored audio signals from the decoded

digitized signals, such that the resulting decoded digitized signals do not contain audio signals broadcasted by the device in electrical communication with the receiver;

at least one comparison component, wherein the at least one comparison component matches at least a portion of the resulting decoded digital signals to one or more commands representing at least one function the home communication terminal is operative to perform; and

a timer, wherein the timer is operative to time-match the audio signals generated by the device in electrical communication with the receiver with the encoded digitized signals received by the receiver.

98. (Canceled)